Corposing a History of Electronic Music

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ABSTRACT

A current research project has collated nearly 2000 historic electronic music works for the purposes of musicology; nonetheless, this collection is highly amenable to composition. New pieces can be realised by rendering a selected chronology of electronic music history. The context is a wider field of compositional endeavour in 'corposition' over large audio databases especially opened by up new research in music information retrieval.

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'Corposition' is a portmanteau of 'corpus' and 'composition' indicating musical works which exploit a large collection of music files. Corposition has precedents in the audio database searching of concatenative synthesis [1], example sets of a given musical style in algorithmic composition [2], sample libraries and plunderphonics including mash-ups [3]. Prototype corpositions might include electroacoustic works founded on multiple sources, such as Daphne Oram's *Pulse Persephone* (1965) compiling sounds from Commonwealth countries, or Karlheinz Stockhausen's *Telemusik* (1966) ring modulating together musics from around the world. On a different scale of source material, *Plexure* (1993) by John Oswald is manually constructed of snippets from 1001 popular music artists [4], R. Luke DuBois' *Billboard* (2005) sequences 857 spectral profiles of Billboard number one chart hits [5], and Johannes Kreidler's *Product Placement* (2008) uses 70200 brief samples within 30 seconds as a protest against the copyright form filling (one form per sample) required by the German registration service GEMA [6].

Mass analysis of audio files has been heavily investigated in recent decades in the field of music information retrieval (MIR), and music based on MIR methods might alternatively be called ‘MIRsic’; in homage to the notion of big data, the term 'big music' has also been applied [7] (hopefully this doesn't belittle all non-big music). I called more than ten years ago [8] for composers to protest against automatic genre recognition systems by such techniques as deliberately inter-linking supposedly distant genres, or flooding markets with mass generated musical outputs with awkward meta-data labeling and non-standard content. Active engagement by composers with the technologies of MIR has much continuing potential, where large corpora are not only raw sample material, but also automatically analysed to inform compositional decision making over sources, or whose meta-data, such as year of composition, can help to govern the structure of a final work.

A recent project (“Large-scale corpus analysis of historical electronic music using MIR tools”, funded by the AHRC) has seen the compilation of 1878 works of historic electronic music circa 1950-1999 for musicology [9], but such a database can also be used in musical creation. Rather than ‘the’ history of electronic music, corpositions described here sonify a single possible trajectory amongst many, providing a snapshot of the works gathered, their changing timbres and technologies over time, and the biases of the curators.

A two minute version as a 16 channel electroacoustic tape piece was first premiered in June 2015, using a provisional 1000 work subset of the final corpus. A progression from 1950 to 1999 at one second per year was formed from short extracts of corpus pieces; the unequal holdings over the chronology led to different densities of material around the 16 channels. After a silence for reflection, the piece regressed in time the opposite way, this time with works each surviving for a few seconds following spatial arcs through the room, a little more overlapped. Finally, after another pause, we returned to 1999, this time travelling fifty years in one second.

The concept permits multiple realisations; since the actual corposition code is generative, rather than 'a history' it might be more pertinent to speak of 'histories', as the weights of individual pieces are shifted within each mix. A more recently rendered one second version "50 Years of Electronic Music in One Second" was premiered for the second Leap Second festival (archived online [10]). Such a one second viewpoint is the inverse of a work like Trevor Wishart's *Imago*

(2002) which creates a twenty five minute work from a single clink of wineglasses; here a week of audio is used to render a highly time compressed output.

To accompany the completion of the research database and this article, a final cut is available (< http://composerprogrammer.com/music/ahistoryofelectronicmusic.wav>).

Corposition gives an explicit route for a corposer to reveal their relationship with the past. Successive layers of precedent and influence can be peeled back as historic time becomes a compositional parameter; or alternative non-chronological routes explored based on extracted audio features and associated meta-data.

References and Notes

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